Effect of type and dosage of silica fume on plastic shrinkage in concrete exposed to hot weather

Al-Amoudi O.S.B., Maslehuddin M., Abiola T.O.

Construction and Building Materials
Vol. 18, Issue.10, 2004

Abstract: The source and dosage of silica fume were varied to investigate their effect on the plastic shrinkage of concrete exposed to hot weather conditions. Highest plastic shrinkage was noted in the concrete specimens prepared with undensified silica fume. The physical properties of silica fume, such as fineness and bulk density, and microscopic properties, such as average pore radius and the total pore volume, were correlated with plastic shrinkage strains. No relationship was noted between the microscopic properties and the maximum plastic shrinkage strains. However, a good correlation was noted between the plastic shrinkage strain and the fineness and bulk density of the silica fume.